



City of Tempe

INSTRUMENTATION & CONTROL TECHNICIAN (SBP)

JOB CLASSIFICATION INFORMATION

<i>Job Code:</i>	463	<i>FLSA Status:</i>	Non-Exempt
<i>Department:</i>	Municipal Utilities	<i>Salary / Hourly Minimum:</i>	\$28.384615
<i>Supervision Level:</i>	Non-Supervisory	<i>Salary / Hourly Maximum:</i>	\$33.186058
<i>Employee Group:</i>	UAEA	<i>State Retirement Group:</i>	ASRS
<i>Status:</i>	Classified	<i>Market Group:</i>	Plant Operator+ (SBP)
<i>Safety Sensitive / Drug Screen:</i>	Yes	<i>EEO4 Group:</i>	Technicians
<i>Physical:</i>	Yes		

REPORTING RELATIONSHIPS

Receives general supervision from the Control Center Supervisor, or other supervisory staff.

May act as a subject matter expert to assist in training other staff.

MINIMUM QUALIFICATIONS

<i>Experience:</i>	Two (2) years of electronic and instrument maintenance and repair experience preferably in a water utility.
<i>Education:</i>	Equivalent to an Associate's degree with major course work in electronics technology, electrical technology or degree related to the core functions of this position.
<i>License / Certification:</i>	<ul style="list-style-type: none">● Possession of a valid driver's license;● Possession of, or required to obtain within 18 months of hire, a Grade I water and/or wastewater treatment certificates issued by the State of Arizona.

ESSENTIAL JOB FUNCTIONS

Essential job functions are the fundamental duties of a position: the things a person holding the job absolutely must be able to do.

To actively support and uphold the City's stated mission and values. To perform complex technical work in the testing, installation, maintenance and repair of all pneumatic and electronic control systems and instruments relative to water and wastewater production and treatment operations. To provide technical support in the design, construction and modification of the Supervisory Control and Data Acquisition (SCADA) system, and to install and maintain/service the Remote Telemetry Units (RTU) that

monitor and control water production and treatment functions. Positions in this class may additionally be given the opportunity, or required, to learn and perform duties in other skill/trade areas (i.e. skill blocks) including: electrical work, mechanical maintenance, water plant operations, and/or wastewater plant operations.

OTHER DUTIES AS ASSIGNED

Please note this job description is not designed to cover or contain a comprehensive listing of all activities, duties or responsibilities that are required of the employee for this job. Duties, responsibilities and activities may change at any time with or without notice.

- Analyze instrument and control system malfunctions; install, maintain, repair and adjust computer system hardware and digital data multiplexing equipment used for indicating, telemetering, measuring and controlling flow, temperature, motion, force, and chemical composition.
- Repair, maintain and calibrate level, pressure and flow telemetry; install, maintain, repair and calibrate all types of process instrumentation used for monitoring water/wastewater parameters such as level, pressure, flow, chemical concentrations, turbidity, and pH.
- Maintain a variety of electronic control devices/instruments used to operate electrical mechanical equipment, record data, indicate equipment status and activate supervisory control; maintain and repair automatic control valves and associated control functions; modify and install a variety of supervisory controls including switches, relays and control loops.
- Design, build, program and modify system displays for the Supervisory Control and Data Acquisition (SCADA) network; develop a functional data base structure for the SCADA system and update the data base as required; operate and program a portable computer and other data communications devices.
- Respond to SCADA system user problems; identify SCADA system malfunctions and refer to IT network administration staff or SCADA system vendor staff for resolution as appropriate.
- Design and modify Remote Telemetry Units (RTU's) to provide control and monitoring functions required for water production and treatment processing; document program design and function procedures; design intuitive graphical user interfaces (GUI's) using control software.
- Design, install, maintain, and modify Remote Telemetry Units (RTU's) to provide timely and accurate data transmission to the host computer on water treatment facility monitoring points; specify and procure parts necessary to build and install RTU's according to design specifications.
- Install RTU's in field locations and terminate control and instrument wiring; inspect and test RTU functions to verify accurate data transmission between the RTU and host computer; coordinate appropriate communications interface for RTU's in various remote locations.
- Develop and write programs for local process control and monitoring, and install programs in RTU's; develop, recommend and install system enhancements to improve process monitoring and control functions; perform data entry as well as programming.
- Inspect, analyze and correct system problems to ensure continuous reliable operation of the SCADA system; inspect, maintain and repair low voltage electrical and control circuit wiring, PLCs, stand-alone controller, relays, and switch logic.
- Participate in training other Water Division staff in the operation and use of the SCADA system; attend training sessions and technical meetings as required; read and interpret technical manuals relating to maintenance and enhancement of the SCADA system.

- Communicate orally and in writing with co-workers and supervisory personnel concerning routine and emergency system functions, maintenance and installation projects; communicate with outside vendors to help specify and procure instruments and related equipment as needed.
- Read and interpret schematics, blue-prints and engineering drawings.
- Perform related duties as assigned.

PHYSICAL DEMANDS AND WORK ENVIRONMENT

- Lift heavy objects up to 75 lbs. (i.e. motors, conduit, and ladders);
- Move heavy objects with forklift, dolly, etc. up to 400 lbs. (i.e. motors and actuators);
- Operate city vehicles (i.e. pick-up, van, forklift);
- Use power tools (i.e. drills, saws);
- Use tools (i.e. screwdriver, hammers, and wrenches);
- Climb stairways, ladders, and work on elevated structures;
- Traverse uneven surfaces;
- Work in a stationary position for considerable periods of time (calibrating and installing meters, and field computer diagnostics);
- Operate computers, calculators, and other office machines;
- Extensive reading and close vision work (meter manuals, computer data input and research up to 6 hours);
- Work in confined areas;
- Work out-of-doors in inclement weather;
- Exposure of heat, cold, dampness, dust, pollen, odors, fumes, etc.
- Exposure to hazards of electrical shock, falls, noise, equipment operation, etc. (some equipment is energized during routine maintenance);
- May require working extended hours (including standby and emergency response);
- Operate city equipment (i.e. tractor and forklift).

COMPETENCIES

CLASSIFICATION LEVEL	INCLUDES	COMPETENCIES
Foundational	All Employees	Inclusion, Communication, Interpersonal Skills, Integrity, Professionalism, and Willingness to Learn
Non-Supervisory	In Addition >	Teamwork, Customer Service, Initiative, and Dependability / Reliability
Supervisory	In Addition >	Staffing, Monitoring Work, Delegating, Development / Mentoring, and Support Others
Manager	In Addition >	Preparing / Evaluating Budgets, Monitoring / Controlling Resources, and Motivating / Inspiring
Deputy Director	In Addition >	Entrepreneurship and Networking

Director	In Addition >	Organizational Vision
<p><i>For more information about the City of Tempe's competencies for all classifications:</i></p> <p><u>City of Tempe, AZ : Competencies</u></p>		

JOB DESCRIPTION HISTORY
<p><i>Effective February 2000</i></p> <p><i>Revised August 2001</i></p> <p><i>Revised July 2005 (license requirement)</i></p> <p><i>Revised December 2016 (added physical/mental activities)</i></p> <p><i>Revised March 2019 (PW Reorg – moved to Municipal Utilities Department)</i></p>